"Non-Blast-Furnace Desulphurization of Cast-Iron," lecture given at the Fourth Conference on Steelmaking, A.A. Waikov, Institute of Metallurgy, Moscow, July 1-6, 1957

137-58-5-9051D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 43 (USSR)

AUTHOR Gromov, M.I.

TITLE An Investigation of the Process of Desulfurization of Pig Iron

in a Rotary Furnace (Issledovaniye protsessa desulturatsii chu-

guna vo vrashchayushcheysya pechi)

ABSTRACT: Bibliographic entry on the author's dissertation for the de-

gree of Candidate of Technical Sciences, presented to In-t metallurgi AN SSSR (Institute for Metallurgy, Academy of

Sciences, USSR), Moscow, 1957

ASSOCIATION Int-t metallurgii AN SSSR (Institute for Metallurgy, Academy

of Sciences, USSR), Moscow

1. Iron--Desulfurization 2. Furnaces--Applications

Card 1/1

3/4 200 . . M. J.

AUTHORS: Gromov, M. I., Tsylev, L.M., Kekunin, A.M., Kotov, V.I.

TITLE: Desulphurization of pig iron outside the blast furnace. (Vnedomennoye obesserivaniye chuguna).

PERIODICAL: Metallurg, 1958, No.3, pp.3-6 (USSR).

APSERACT: The authors give diagrams (Fig.1) to show the various methods tried in the USSR and abroad for the external desulphurization of pig iron with roda, calcium carbide or other solid reagents. They suggest that their comparative neglect is due mainly to their relative inefficiency and low productivity. The French IRSID method they criticize on the additional grounds that it rould be difficult to effect on a large scale, that special arrangements would be required for tropping the lime dust produced, that the finely divided reagent yould be difficult to obtain and that nitrogen is not available at many works. They go on to describe a method developed at the Novo-Lipetskiy metallurgical works in which the liquid metal is treated with lime in a rotating vessel, coke being added to maintain a reducing atmosphere. B. Provotorov, A. Nikitin and Card 1/3 L. Sidorin participated in this work. Experiments

Desulpharization of pl. iron outside the blast furnece.

showed that the deculphurization process is affected by the fluidity of the metal, the quantities of solids added per unit weight of metal, the sicing of the solids and the speed of rotation of the vessel. The internal diameter of the e perimental vescels (Fig. 1) was 1050 marend the length of the cylindrical part 1240 am; one and was conical. With chrone-magnetite lining no build-up of clay on the walls or chemical disruption of the lining occurred. Wid. speeds of resisten of 2.5 and 4.4 m/sec the nulphur content of the metal fall from 0.085 to 0.03-0.012%. The authors live a concerna for determining the optimal speeds of rotation in relation to the viscosity of the motal and the vessel diameter, and this shows that the optimal speed for the experimental conditions was 9-10 m/sec which would have given more rapid desulphurization. The method is recommended to other works, the following being liven or ontimal conditions: lime with a minimal posterat of milica and corbon dioxide, under 1 ma in particle size and added in a quantity of 1% by weight of the lion; coke of marticle size 1-3 mm to be added in a qualitary of 0.3-0.5% of the weight of the iron; the entires of alegor summer send

Card 2/3

Desulphurization of pig iron outside the blast ferences. 37 -3-7/22

into the vessel and the formation of encountrions on the liming to be prevented. An editorial note rape that the Gipmonez organization is designing a 100-ton capacity vessel.

Thoro ore those figures.

ASSCCIATION: Institut metallurgii AN SSSR 1 Novo-Lipetskiy

metallurgicheskiy zavod (Institute of Metallurgy AS USSR and the New-Lipetsk Metallurgical Plant.

AVAILABLE: Library of Congress.

Card 3/3

SOV/180-59-3-5/43

AUTHORS: Gromov M.I. and Tsylev L.M. (Moscow)

FITLE: On the Mechanism of Desulphurisation of Pig Iron with

Solid Lime

IERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk Metallurgiya I toplivo, 1959, Nr 3, pp 25-28 (USSR)

ABSTRACT: The existing theories on the mechanism of the transfer

of sulphur from slag to metal are discussed. In order to study the mechanism of desulphurisation of pig iron (solid pig iron - solid lime and liquid pig iron - solid lime)

experimental work has been carried out. In the first series of experiments ignited lime balls were placed in a crucible, surrounded by crushed pig (0.08 - 0.1% S) and heated to various temperatures (600 to 900°C) for

heated to various temperatures (600 to 900°C) for periods of 20 minutes to 3 hours. In the second series lime balls were dipped into molten pig iron and retained in it for periods from 1 second to 15 minutes. The surface of the lime balls was then analysed by petrographic and X-ray methods. It was found that in no case did the lime surface contain iron but only CaO, CaS and

in the case of solid iron ${\rm CaSO}_{I_k}$: the amount of which was decreasing with increasing temperature at which the

Card 1/2 experiment was carried out. On the basis of the results

SOV/180-59-3-5/43

On the Mechanism of Desulphurisation of Pig Iron with Solid Lime

obtained, the following mechanism of the desulphurisation with solid lime is postulated: in liquid metal, sulphur is present in the form of sulphur ions which are adsorbed on the surface of the lime, replacing oxygen in the crystal lattice:

$$[s] + (0^{2-}) \longrightarrow (s^{2-}) + [0]$$

As however, oxygen is more electronegative than sulphur, its bond with calcium should be stronger and probably some additional forces are necessary to replace it in the lattice with sulphur. It is thought that carbon has a weakening influence on the calcium oxygen bond. The apparatus used for the experiments for dipping lime balls into molten iron is shown in Fig 1. There is 1 figure and 5 references, 3 of which are Soviet and 2 English.

SUBMITTED: January 26, 1959

Card 2/2

GROMOV, M.I., kand.tekhn.nauk, Moskva.

Natural gas in metallurgy. Priroda 49 no.9:60-61 S '60.

(MIRA 13:10)

(Iron--Metallurgy) (Gas, Natural)

ARTEMENKO, I.A.; OROMOV, M. I.; TSYLEV, L.M.

Technological processes for extracting concentrates for producing thickeners. Biul.tekh.-ekon.inform. no.11:3-4 160.

(MIRA 13:11)

(Ore dressing)

BOGDANOVICH, K.I.; CRCMOV, M.I.

New soda substitute for the desulfuration of pig iron. Trudy
Inst. met. no.12:16-19 '63. (MIRA 16:6)

(Desulfuration)
(Calcium manganese oxide)

GROMOV, M.I. (Moskva); SHUEEKO, P.Z. (Moskva); TSYLEV, L.M. (Moskva); KOLESNIKOVA, L.L. (Moskva)

High speed magnetic rossting of iron ores in two-stage system vortex chambers. Izv. AN SSSR. Met. i gor. delo no.1:15-19

Ja-F '64. (MIRA 17:4)

GROMOV, M. (M.)

"Distance," article published in Samoylet (Airplane), No. 1, Jan. 11, Moscow

M. Gromov, famous flyer and a "Hero of the Soviet Union," wrote a two-page article entitled "Distance" (of airplane flights) which appeared in the "Today and Tomorrow" section of the No. 1 issue of the magazine Samoylet, January 41. This is a popular article on the importance and possibilities of the long distance non-stop air flights. According to the author, the day is not too far off when it will be possible to make a non-stop flight around the earth in some 80-90 hours.

GROMOV, M.M., geroy Sovetskogo Soyuza, general-polkovnik aviatsii.

Paticipate in sport! Discussion with Air Force Colonel-General
M.M. Gromov, Hero of the Soviet Union. Voen.snan. 31 no.8:1 Ag '56.

(MIRA 9:11)

(Physical education and training)

OROMOV, M., geroy Sovetskogo Soyusa.

Moscow - North Pole - United States. Kryl. rod. 8 no.7:14-15 Jl '57.

(Aeromautics--Flights) (MIRA 10:9)

DUZ', Petr Dmitriyevich; SECKNOV, V.A., prof., doktor tekhn.nauk, general-mayor, maslumbennyy deystel nauki i tekhniki, retmenzent; GROMOV, M.M., prof., general-polkovnik, retmenzent; ANOSHCHENKO, N.D., prof., retmenzent; EERKOVICH, D.M., kand. tekhn.nauk, red.; BELEVTSEVA, A.G., izdat.red.; ROZHIN, V.P., tekhn.red.

[History of seronsutics and svistion in the U.S.S.R.; period of the First World War, 1914-1918] Istoriis vozdukhoplavaniis i avistsii v SSSR; period pervoi mirovoi voiny, 1914-1918 gg.

Moskva, Gos.neuchno-tekhn.izd-vo Oborongiz, 1960. 298 p.

(Aeronautics-History) (MIRA 13:11)

GROMOV. Mikheil Nikolayevich, kand.ekon.nauk; TARARUKHIN, A., red.;
PAVLOVA, S., tekhn.red.

[How to ensure correct labor organisation] Kak obespechit'
pravil'nuiu organisatsiiu truda. Moskva, Mosk.rsboothii, 1960.
30 p. (Mira 13:12)

(Moscow Province--Farm management)

(Moscow Province--Agricultural wages)

GROMOV, M.N., kand. ekonom. nauk; KALASHNIKOVA, V.S., red.; GUREVICH, M.M., tekhn. red.

[How to shift to a new wage system on state farms] Kak pereiti na novuiu oplatu truda v sovkhozakh. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 151 p. (MIRA 14:12) (Agricultural wages)

LOZA, G.M., prof.; BUZILOV, Yu.T., dots.; GROMOV, M.L., dots.;
NIKIFOROV, M.A., dots.; FEFELOV, V.P., kand. ekon. nauk;
SINYUKOV, M.I., dots.; SAL'KOVA, A.D., dots.; GRANDITSKIY,
P.A., dots.; TIKHONOVA, Ye.M., red.

[Practical aid for the organization and planning of production on collective and state farms] Praktikum po organizatsii i planirovaniiu proizvodstva v kolkhozakh i sovkhozakh. Moskva, Kolos, 1965. 526 p. (MIRA 18:5)

RUDENKO, A.M.; SPITSA A.I.; GROMOV, M.S.

Virusological characteristics of poliomyelitis in Dnepropetrovsk Province. Vop. virus. 7 no.2:240-211 Mr-Ap 162. (MIRA 15:5)

1. Dnepropetrovskiy institut epidemiologii, mikrobiologii i gigiyeny.
(DNEPROPETROVSK PROVINCE—POLIOMYELITIS)

GROMOV, M.V.

Treatment of fractures of the upper part of the humerus in children. Vest.khir.76 no.8:52-55 8 '55 (MLRA 8:11)

1. Is kliniki detskoy khirurgii (zav.prof. S.D.Ternovskiy) 2-go Moskovskogo meditsinskogo instituta im. I.V.Stalina na baze detskoy bol'nitsy im. prof. Filatova (glav.vrach M.N.Kalugina) Moskva.
120-b, per Obukha, d.6, kv.13.
(SHOULDER, fractures

(SHOULDER, fractures in child, management) (FRACTURES shoulder, in child., management)

Rare case of diffuse angiomatosis of the lower extremity in association with congenital rib dislocation. Nurrection no.9: 106-107 '61. (NUL. 15:5)

l. Iz kliniki travmatologii i ortopedii (zav. - prof. 7.A. Ghornav-skiy) II Moskovskogo gosudarstvennogo medintsinskego Instituta Imeni N.I. Pirogova i patologoanatomichoskogo otdeleniya A-y Gorodskey klinicheskoy bol'nitsy (glavnyy vrach G.F. Pspko), Korva.

(ANGIOMATOSIS) (EXTREMITIES, LOWER-DISE/SES)

(RIBS--DISLOCATION)

GROMOV, M.V., dotsent

Alloplastic restoration of the ligament apparatus of the knee joint. Nauch.trudy Chetv.Mosk.gor.klin.bol'. no.1295-104 '61. (MIRA 1612)

1. Iz kliniki travmatologii i ortopedii (zav. klinikoy - prof. Chernavskiy, V.A.) 2-go Moskovskogo gosudarstvennogo meditsinskogo instituta imeni N.I. Pirogova (dir. - dotsent M.G. Sirotkina).

(KNEE-SURGERY) (LIGAMENTS-SURGERY) (SURGERY, PLASTIC)

GROMOV, M. V.

GPONOV, N. V.:

"Enclosed fractures of the preximal portion of the shoulder in children and their treatment." Second Moscow State Medical Inst imeni I. V. Stalin. Moscow, 1956. (DISSERTATION For the Degree of Candidate in Medical Science.

So: Knizhnaya Letopis', No. 18, 1956

BUBENNIKOV, Aleksandr Vasil'yevich; GROMOV, M.Ya., prof., doktor tekhn. nauk, otv. red.; SAGITULLINA, R.I., tekhn. red.

[Descriptive geometry; principal methods for prejecting geometric forms on a plane] Nachertatel'naia geometria; cenovnye metody proektirovaniia geometricheskikh form na ploskosti. Moskva, Vses. sacchnyi politekhn. in-t. Lektsiia no.l. 1959. 46 p. (MIRA 16:4)

(Geometry, Descriptive)

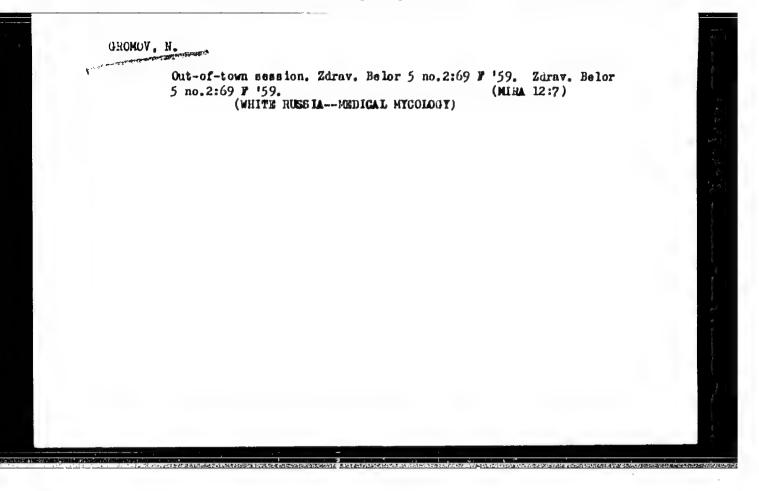
BUHERRIKOV, Aleksandr Vasil'yevich; <u>GROMOV</u>, Mikhail Yakovlevich; IVANOV, N.H., red.; OVSYANNIKOVA, Z.G., red.izd-va; MURASHOVA, V.A., tekhn. red.

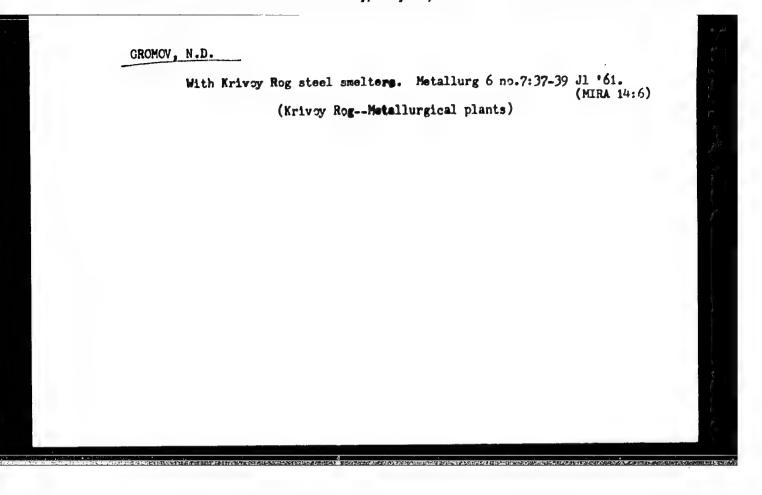
[Problems in descriptive geometry] Sbornik zadach po nachartatellowy geometrii. Moskva, Vyssisala ankola, 1961, 282 p. (Mick 1741)

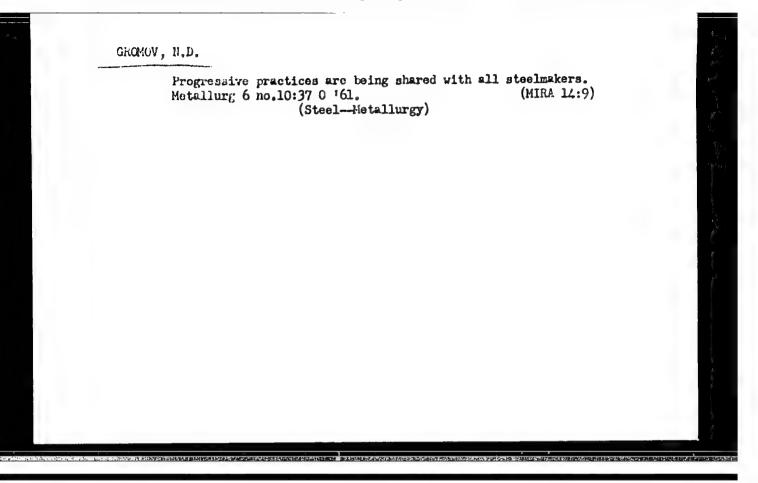
BROWNERS, Alexanders but Physically Rell V, 1. No., tester telling men, 4 rods, stv. 100.

[December of maiffeation of creating, curver) Eachertatelling commetring toolks, primain, plockett, monophy procedures and contexted, knive limit. Mockes, Vic., zaochnyl politekha. 3n-t, 100... 354;

(M.E.Z. 1815)







S/028/62/000/010/001/001 D201/D308

AUTHORS:

Gromov, N.D., Kasatkin, N.M. and Kaplan, A.S.

TITLE:

Thermobimetals

PERIODICAL:

Standartizatsiya, no. 10, 1962, 16-21

TEXT: The authors describe the principles underlying the proposed new specification of standards related to bimetallic strips. The new standard specification consists of the letters T6 (TB) followed by a four-digit number. The first two digits correspond to the magnitude of the specific bending coefficient multiplied by 100. The third digit shows that the value of the nominal specific electrical resistance of the strip belongs to one of the groups of properties specified in a table of standards. The fourth digit indicates that the maximum operating temperature belongs to one of the groups of the same table. In the proposed new standard specification the heading 'Technical requirements' standardizes the sensitivity and heading 'Technical requirements' standardizes the sensitivity and electrical resistance of the material only. All other physical properties of the bimetal and of its separate components are indicated.

Thermobinetals ...

3, 520, 52, 000, 110, 501, 501 D201/D308

ted in an appendix to the specification which, for every standard type of bimetal, sets the limits of its specific bending factor A in 1/°C, the sensitivity H, 10°1/°C and of the specific resistivity P, ohm.mm²/m. A method for sensitivity testing is also included. The instrument for determining the specific bending coefficient has not yet been fully developed. The standard specification discussed here is to replace the two existing standard specifications for bimetal strips FOCT 5193-50 (GOST 5193-50) and GOST 5198-50. There are 4 tables and 4 figures.

Card 2/2

GROWN, Nikeley incorrupevich, Teller, this, inco. increat Gove proudly reinencent

(Intensification of stem proportion) intensificated in protection rule. Market, the voltetallurgity."

1964. 168 p. (Cital Chil)

"APPROVED FOR RELEASE: Thursday, July 27, 2000

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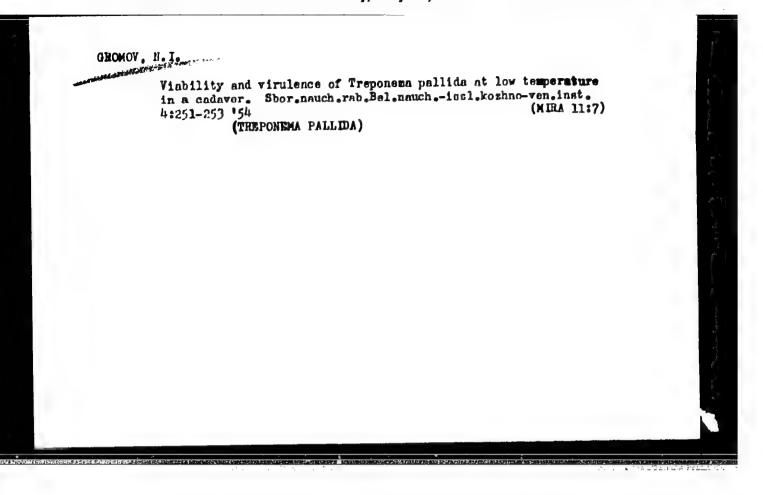
GROMOV, N.G.

DECEASED

c1960

See ILC

AGRICU TURE/Mushrooms



USSR/Fharmacology and Toxicology. Chemotherapeutic Preparations

V-7

intibiotics

Abs Jour : Ref Zhur - Biol., No 15, 1958, No 71276

Author : Prokopchuk A.Ya., Gromov N.I., Raskina R.I.

Inst : Belorussian Scientific Research Dermatovenereal Institute
Title : Experience in the Treatment and Prophylaxis of Pyogenic

Diseases of the Skin with Triple Dyes and Intibiotics

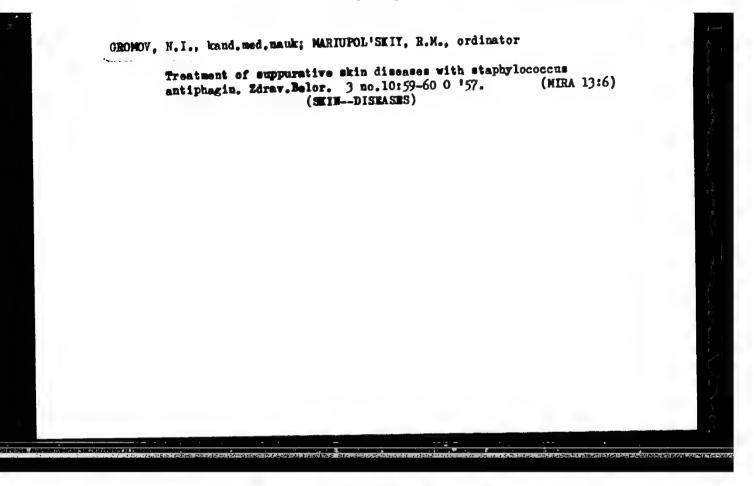
(Synthomycin, Biomycin and Terramycin)

Orig Pub : Sb. nauchn. rabot. Belorussk. n.-i. kozhno-venerol. in-t,

1957, 5, 116-119

Abstract : No abstract

Card : 1/1



PEVZNER, Ye.S.; RASKINA, R.I.; GROMOV, N.I.

Our paste for washing and protecting the hands as a means of preventing dermatitis and suppurative skin diseases among metal workers. Sbor. nauch.rab.Bel.nauch.=issl.kozhno-ven.inst. 6:211-214 *59. (MIRA 13:11) (HAND--CARE AND HYGIENE) (OINTMENTS)

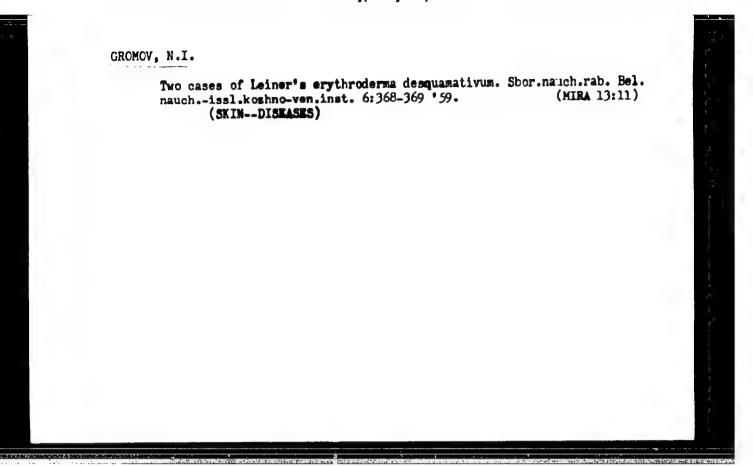
GROMOV. N.L., kand.med.nauk; PETRUSHA, I.S., vrach; SOSLAND, R.D., vrach

Terramycin in the prevention and treatment of suppurative skin diseases. Sbor.nauch.rab.Bel.nauch.-issl.kozhno-ven.inst. 6:276-278

'59. (MIRA 13:11)

(SKIN--DISEASES)

Control of suppurative skin diseases in the industrial and peat enterprises of the White Russian S.S.R. Sbor.nauch.rab.Bel.nauch.issl.kozhno-ven.inst. 6:365-367 '59. (MITE RUSSIA--PEAT INDUSTRY--HYGIENIC ASPECTS) (SKIN--DISEASES)



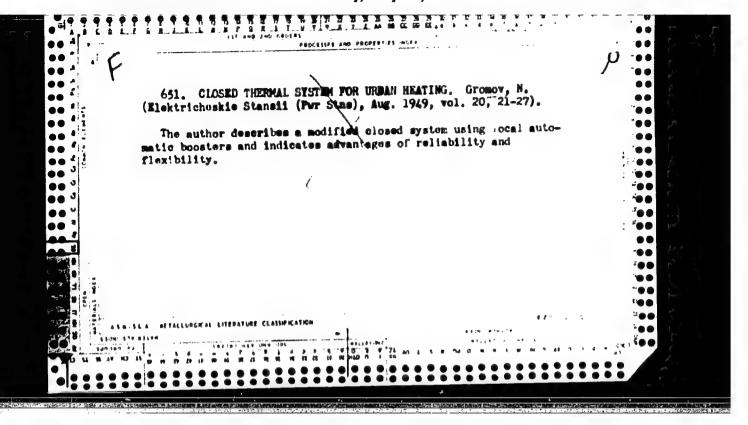
GROMOV, N.I. Case of trichosporosis nodosa. Sbor.nauch.rab.Bel.nauch.-issl.koshnoven.inst. 6:770-771 *59. (HAIR-DISEASES) (MEDICAL MYCOLOGY)

GROMEV, N. K. Card. Tech. Sci.

Discertation: "Rational System of Heat Supply for Cities." Power Engineering Instiment G. M. Krzhizhanovskiy, Acad Sci USSR, 24 Apr 47.

X: Yecterryaya Meskya, Air, 1947 (Freject #17936)

1.1.6126 with Wy Mille Nov 49 USSR/Engineering - Heating Power Supply "Some Results in Moscow District Heating and Power Supply and Tasks for the Immediate Future," N. K. Gromov, Cand Tech Sci, 4 pp "Elek Stants" No 11 Describes Moscow stations and pipe systems which supply about 550 dwellings, over 100 schools and hospitals, over 300 institutions, and over 80 industrial enterprises. However, all these represent only about 15% of possible users of district heating, and system is still being extended. Includes two sketches. 15**6T**26



GROMOV, N.K. Basic problems of operating the heat supply system of Moscow. Gor.khoz.Mosk. 25 no.10:6-10 0 '51. 1. Gromov, E.K., glavnyy inshener Teploseti Mosenergo. (Moscow--Heating from central stations) (Heating from central stations--Moscow)

[Control of corrosion in heating networks] Opyt bor'by a korrosiei v teplovykh setiakh. Pod red. N.K.Gromova. Moskva, Gos.energ.izd-vo, 1953. 51 p. (MLRA 6:10)

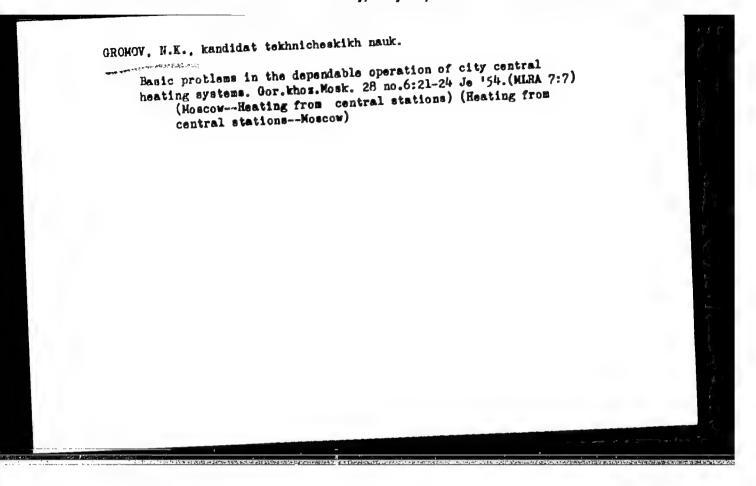
(Corrosion and anticorrosives) (Heating from central stations)

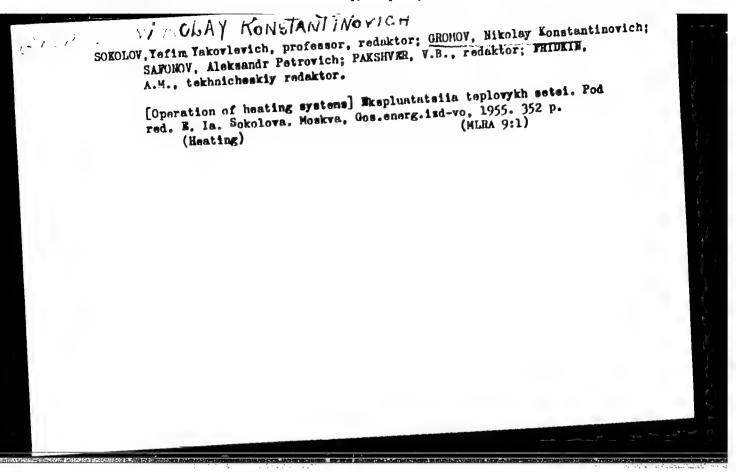
GROMOV. N. K. - LUK'YANOV. V. I. - FILIPOV. M. F.

Moscow - Heating from Central Stations

Practical systems for district heat supply in Moscow. Gor. khoz. Mosk. no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.





AID P - 2907

Subject

ETTIN CONTR

USSR/Electricity

Card 1/2

Pub. 26 - 4/32

Author

Gromov, N. K., Kand. Tech. Sci.

: Immediate problems in automation of district heating

Title

systems Elek.sts, 7, 14-18, Jl 1955

Periodical Abstract

The author reports on the conditions and operation of district heating networks and on "chaotic" hot water distribution. The article deals with different types of automatic inlet regulators used for heating hot water and ventilation systems. Their diagrams are given. The article further reports on experiments made by the District Heating Network of the Moscow Power System and the Engineering and Construction Institute im. Kuybyshev. The All-Union Technical Institute im. Dzerzhinskiy was put in charge of working out new methods for the installation of automatic

regulators. Five diagrams,

AID P - 2907

Elek. sta., 7, 14-18, J1 1955

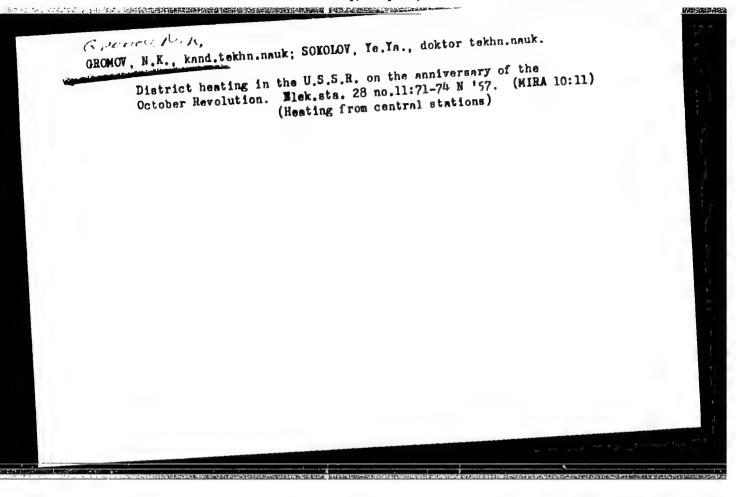
Card 2/2 Pub. 26 - 4/32

Institution: None

Submitted : No date

"APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00051702



SENKOV, F.V., kand.tekhn.nauk; KOMOVALOVA, A.P., inzh.; KOHOMOVICH, Yu.V., inzh.; YELISEYEVA, A.S., tekhnik; POLYAKOV, V.F., tekhnik; GROMOV, N.K., kand.tekhn.nauk, retsenzent; VOL'FKOVICH, M.Ye., retsenzent; CHABROV, I.M., red.

[Regulation of the daily allowance of heat supply to apartment houses and public buildings; scientific report] Reshimy sutochno-go regulirovaniia otpuska tepla shilym i obshchestvennym zdaniiam; go regulirovaniia otpuska tepla shilym i obshchestvennym zdaniiam; nauchnoe soobshchenie. Pushkin, Akad.kommun.khoz.im.K.D.Pamfilova, (MIRA 13:5)

1959. 73 P. (Heating from central stations)

50V/96-59-4-3/21

AUTHOR:

Gromov, h.K., Candidate of Technical Sciences

TTTLE:

Measures to Reduce the Cost and Construction Time of Heating Systems (Meroprivative po schakeniyu stoimosti i

stekov stanibel stow teplowyki Setey)

PERIODICAL: Teploanenge: ira, Left, Nr 4, pp 17-20 (USSR)

ABSTRACT:

One of the main reasons why, in many cases, district heating does Lot give the designed fuel economy is that the heat cutput of the tormines is not fully used because of the slow rate or construction of beating systems. This cours tecause a number of technical and This course tecause a number of technical particularly because organizational problems are unsolved particularly because of the high cost of heating systems. It is important that the lag in the construction of heating systems should be quickly overions. The influence of pipswork and other equipment is first considered. At the present time there is a very heavy demand for steel piping and great economy in its use is important. A most effective way of economising steel plas is to set down the wall thickness. Presibilities in his direction are somewhat limited by the restricted range of tube symblaths. One of the

Card 1/4

HOV/96-59-4-3/21

Measures to Radite the Cost and Construction Fine of Heating Systems reasons why take wall thitmesses have to be kept up is bacarae of receipt troubles. Bituminous protective opulatings have been relatively successful in cutting down cornesion or whiles, ther bypes of protective paint have not been so good. Perso should be wrapped with paper to prevent damage to the properties, overing in transport. The lesign organisations should pay more arcention to catholic protection. Since steel tubes are in such short supply and require to be of protection it may be advantagaous to use wichterality tawas such as asbestos dements, glass a planta, or partament the first results with a sheaten merent and glass tutes are primising. the mathed of installation and the type of heat insulation used have improved effects on the cost of construction of heating systems. Several promising new heat insulating materials have recently teen developed notably, cellular ceramics and thermo peat. Such materials should be carefully tried out in practice. It is considered justifiable but to provide tormal insulation on the remain line of larg testing hains of 800-1000 mm diameter Card 2/4

0....

307/96-59-4-3/21

Measures to Reduce the Cost and Construction Time of Heating Systems

This question should be even where fuel is expansive specially considered in each particular case. Sometimes, in order to avoid waste, heating lines have been laid that were not big enough to provide adequately for future development and parallel lines have then had to be laid at much greater overall cost. This kind of trouble is best overcome by avoiding selectivity in the provision of heat supply and by providing heat supplies simultaneously on a fully developed scale for each particular district. In order to ensure economy at consumers installations they must be provided with appropriate instruments and automatic control equipment but unfortunately the output of automatic control equipment is quite inadequate. Various other types of equipment that are also in short supply are mentioned. Special efforts should be made to rationalise and mechanise the construction of heat supply lines, primarily by the use of factory produced components.

Card 3/4

SOV/96--59--4--3/21

Measures to Reduce the Cost and Construction Time of Heating Systems
To avoid disputes general standards should be developed
for the inspection and acceptance of heating systems.

ASSOCIATION: Mosenergo

Card 4/4

14(6)

207/91-59-5-2/27

AUTHOR:

Gromov, M.K., Ungineer

TITLE:

The Technical Foundations of Thermofication of Moscow

(Tekhnicheskiye osnovy teplofikatsii Moskvy)

PERIODICAL:

Energetik, 1959, Nr 5, pp 3-8 (UJSR)

ABSTRACT:

This is an account of recent developments in the Moscow thermofication system, and covers such matters as thermal equipment of yower plants, water and steam networks, hydraulic and thermal regimes of water networks, technical equipment of networks and thermal points, organization of service, and a few recommendations on what should be done in order to secure the best results from the whole thermofication system. The annual output of heat delivered in 1958 to the Moscow consumers reached 9 million "Mkkal". Extensive thermofication has reduced the attending personnel by 10,000. Since the end of WMII, the old AT-25 and AP-25 turbines (25,000 kg, 29 atm, 400 3) were

Card 1/4

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The Technical Foundations of Thermofication of Moto w

gradually replaced by high-presence VI -25 turbines (25,000 km, 90 atm, 400 c). They are planned to be supplemented with 50,000-100,000 he burbines, soon. Old boilers will be replaced by Jas-fired, peak beliers developed by the VTI. The principal pumps are 1000-1200 ton/hour pumps, the principal prantes have sapacities of 500-550 m². The water for the heating notworks is now bested up to 150°s, which results in climination of mater assumulators in residential houses. Water is fed in under 9-11 atm. Over 3000 water elevators, the TSTs pumping stations and four substations, two of which are fully automatic, ensure the proper circulation. Ralius of bot water network has grown to 7 km. Hetworks of separate TETs are intersonnected. The maximum radius of hot steam (3-46 atm) increased to 3 km. About 45% of used steam returns to TETs. The Moscon heating network has underground pipes,

Card 2/4

307/91-59-5-2/27

The Technical Foundations of Thermofication of Moscow.

of two-pipe type. The VTI and the plant "Krasnyy Stroitel" have developed a new type of twin-pipe line, consisting of two asbestes-cement pipes put upon each other, with a mineral wadding in between. They tested well in dry grounds. The Mospodaemstroy successfully uses the prefabricated blocks containing an asbestos-cement and steel pipes, with a mineral wadding in between. The automatic relay regulator developed by the ORGAES have found wide application on the thermal mains. The Moskovskiy energeticheskiy institut (Moscow Institute of Energetics) has developed a device called "Dispetcherskiy raport" (Dispatcher's Report), which, using only two telephone wires, communicates 6 parameters of steam from any point of the steam network. This device is undergoing modification aimed at enabling it to automatically inspect 50 central points at one time. The municipal thermal net-work is subdivided into 6 districts,

Card 3/4

207/01-59-5-2/27

The Technical Foundations of Thermofication of Moscow.

operated and controlled by the Disparater Point of the Teplacet. There are 3 tables.

Jard 4/4

GROMOV, N.K. Production tasks of the seven-year plan for the development of district heating systems in Moscow. Gor.khos.Mosk. 33 no.2:14-18 F '59. (MIRA 12:3) 1. Glavnyy inzh. Upravleniya teploseti "Mosenergo.". (Moscow--Heating from central stations)

GROMOV, N.K.

Prevention of corrosion in a heat supplying network. Energetik 9
(MGRA 14:8)
no.8:34 Ag '61.
(Heating from contral stations) (Pipelines—Corrosion)

GROMOV, N.K., red.; DUKHOVMAYA, S.M., red.; FRIDRE:, L.M., tekhn. red.

[Single-pipe systems of heat distribution networks] Odnotrubnye sistemy toplovykh setei; sbornik statei. Moskva, Gosenorgolzdat, (MIRA 15:5)

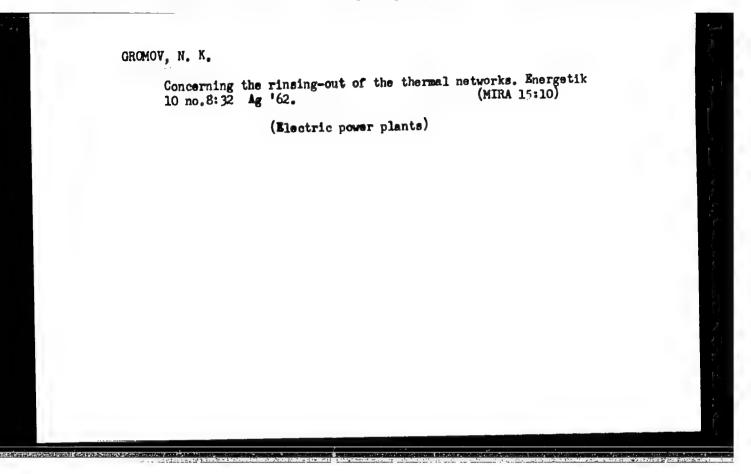
1962. 207 P.

(Heating from centrol stations)

MITTEL'MAN, L.M., kand.tekhn.nauk; GROMOV, N.K., inzh. Concerning S.E.Shitsman's article "Methodology for accounting for and standardisation of technical and economic indices of thermal electric power plants." Elek. sta. 33 no.8:39-91 Ag '62.

(MIRA 15:8)

(Electric power plants-Standards) (Shitsman, S.E.)



Development of centralized heating in Mosorw. Paginenergative 11 no.11:7-12 N '64. (MRA 17.12)

1. Teploset' Moskovskogo rayonnogo upravlentya energaticheskogo khozyayatva.

VUKALOVICH, M.P.; GROMOV, N.K.; IMERITSKIY, M.I.; KARTOSHKIR,
M.D.; KOBRIDA, R.B.: LEOHOVA, A.Ya.; TROYANSKIY, Ye.A.;
MARHYLOV, P.M.; SHUKHER, S.M., red.

[Heat engineer's handbook] Spravochnaia knizhka teplotokhmika. Izd.2., perer. i dop. Moskva, Energiia, 1964.
(MIRA 17:12)

287 p.

AKSENOV, Mikhail Alekseyevich. Prinimal uchastiye GROMOV, N.K., kand. tekhn. nauk; SINEL'MIKOVA, L.N., red.

[Heating networks; sources and consumers of thermal energy. Installation, maintenance, and repair of networks] Teplovye seti; istochniki i potrebiteli tepla. Ustroistvo, obsluzhivanie i remont setei. Moskva, Energiia, 1965. 351 p.

(MIRA 18:9)

MAL'TSEV, B.G.; GROMOV, N.N., kandidat ekonomicheskikh nauk, retsenzent; MORIN, L.A., inzhener, retsenzent; EIRHENVAL'D, A.V., kandidat ekonomicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor.

[Planning in a foreman's section] Opyt planirovaniia na uchastke mastera. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 81 p. (MIRA 9:1)

(Machinery industry--Accounting)

STARCHENKO, D.I., kandidat tekhnicheskikh nauk; GROMOV, N.P., redaktor; MIKHAYLOVA, V.V., tekhnicheskiy redaktor

[Comprehensive groove designing of shaped profiles] Regressuitata kalibrovka fasonnykh profilei. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952. 247 p.(HLRA 8:10) (Rolling mills)

GROMOV, N.P., kandidat tekhnichoskikh nauk, nauchnyy redaktor; NEPOMNYA-SHCHIY, N.V., redaktor; PETROVA, N.S., tekhnicheskiy redaktor

[Press working of metals; collection of articles] Obrahotka metallov davleniem; sbornik statei. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii. No.3. 1954. 267 p. (MIRA 7:10) (Rolling (Metalwork))

TARNOVSKIT, I.Ya., doktor tekhnicheskikh nauk, professor; GROMOV, H.P., redaktor; STARODUBTSEVA, S.N., redaktor; ATTOPOVICH, M.I., tekhnicheskiy redaktor

[Deformation during the plastic molding of metal; forging and rolling] Formoissemenie pri plasticheskoi obrabotke metallov; kovka i prokatka. Moskva, Gos. nauchno-tekhn. isd-vo lit-ry po chernoi i tavetnoi metallurgii, 1954. 534 p. (MIRA 7:9)

(Deformations (Mechanics)) (Forging)

(Rolling (Metalwork))

"APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051702

POLUHIM, Petr Ivanovich; GROMOW, N.P., redaktor; GOLYATKIMA, A.G., redaktor; TARARMMIO, E.T., tekhnicheskiy redaktor.

[Rolling and shaping of I-besss] Prokatka i kalibrowka dvutavrovykh balek, Moskva, Gos.nauchno-tekhn, ind-vo lit-ry pecheraci i tavetnoi metallurgii, 1956.175 p., 137 diagrams.

(Girders) (Rolling (Netalwork))

(MIRA 9:5)

GROMOV, W.P., knndidat tekhnicheskikh nauk, redaktor; VALOV, W.A., redaktor,

ATTOPOVICH, M.K., tekhnicheskiy redaktor.

[Press working of metals; a collection of articles] Obrabotka metallov davleniem; sbornik statei. Moskva, Oos. nauchno-tekhn. izd-vo lit-ry pc chernoi i tsvetnoi metallurgii. No.4, 1956. 239 p. (MLMA 9:4)

(Rolling (Metalwork))

GRONOV, N.P., kand. tekhn. nauk; GOLOVANENKO, S.A., kand. tekhn. nauk;

KANATKIN, N.M., insh.

New thermostatic bimetals. Vest. elektroprom. 27 no.8:32-33 Ag '56.
(MIRA 10:9)

1. Institut pretsizionnykh splavov TSentral'nogo nauchno-issledovatel'-skogo instituta chernoy metallurgii.
(Thermostat) (Metals)

Brown to M.

137-1957-12-35388

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 334 (USSR)

AUTHORS: Gromov, N. P., Il'ichev, A. I., Kasatkin, N M.

TITLE: Manufacture of Alloys With a Rectangular Hysteresis Loop (Proizvodstvo splavov s pryamougol'noy petley gisterezisa)

PERIODICAL: Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, 1956, Nr 15, pp 259-273

ABSTRACT: Research on alloys was conducted in three areas: a) creation of a texture in Fe-Ni alloys, b) utilization of the texture of certain alloys by means of thermomagnetic treatment, c) utilization of the increase in residual inductance of some alloys with a reduction in the thickness of the strip to 5 \mu. Basic technological operations and peculiarities are given for the production of strips composed of three alloys: 65 NP, 45 NKP, and 34 NKMP. Magnetic properties of strips of various thickness, prepared from these alloys, are also shown.

P. N.

Card 1/1 1. Alloys-Development 2. Alloys-Applications 3. Alloys-Manufacture

"APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051702

GROMOV, N.P., kand. tokhn. nauk, naucynyy red.; VALGV, N.A., red.
izd-va; ISLERTYEVA, P.G., tekhn. red.

[Rolling practice and pipe manufacture]Prokatnoe i trubnoe proizvodstvo; sbornik statel. Moskva, Metallurgizdat, 1958. 384 p.
(Rolling (Metalwork)) (Pipe mills)

(Rolling (Metalwork)) (Pipe mills)

KOROLEV, Andrey Andreyevich, kand.tekhn.nauk, dots.; KUZ'MIN, A.D., kand.
tekhn.nauk, retsenzent; DVINYANIMOV, S.A., insh., retsenzent;
GROMOV, N.P., kand.tekhn.nauk, red.; GSIPOVA, L.A., red.izd-va;
RITKID, V.D., tekhn.red.

[Rolling mills; construction and design] Prokatnye stany; konstruktsita i raschet. Moskva, Gos. nauchn.-tekhn.izd-vo mashinostroit.
lit-ry, 1958, 450 p.
(Rolling mills)

(Rolling mills)

SOV/126-6-5-9/43

AUTHORS:

Borodkina, M.M., and Gromov, H.P.

TITLE:

Study of the Texture of a 50% Fe-50% Ni Alloy in the Form of Strip of Various Thicknesses (Izucheniye tekstury splava 50% Fe-50% Ni v vide lenty razlichnoy tolshchiny)

PERIODICAL: Fizika Metallov i Metallovedeniya, 1958, Vol 6,

Nr 5, pp 819 - 824 (USSR)

ABSTRACT:

The deformation and recrystallisation textures of strip of various thicknesses of the alloy 50NP (Permalloy) was studied by the pole figure method. Strip of thickness 0.05, 0.02, 0.01 and 0.005 mm was obtained by hot relling without intermediate annealing. Two series of X-ray photographs, in which the specimen was turned through 10 between each exposure, were sed to construct pole figures taken at a vertical and horizo tal position to the rolling direction. The texturegraphs were agen by a Laue-type camera in a Mo-irradiation. For the study of the texture of different layers, the strip specimen was electrolytically polished. The most pronounced orientations were found to be (110) [112], (112) [111] and (236) [539].

On annealing a strip of 0.05 mm thickness, a distinct

Cardl/3

SOV/126-6-5-9/43 Study of the Texture of a 50% Fe-50% Ni Alloy in the Form of Strip of Various Thicknesses

cubic recrystallisation texture, (001) 1001, forms. difference in deformation texture between strip of 0.005 mm and 0.05 mm thickness consists in the orientation (110) [112] being less pronounced and the number of disorientated crystals being greater in the thinner strip (see Figure 1). A decrease in strip thickness from 0.5 to 0.005 mm leads to gradual disappearance of recrystallisation texture (see Figure 4). The method of deformation influences the deformation texture and the effect of recrystallisation texture disappearance in a very thin strip (see Figure 8). The reason for the disappearance of recrystallisation texture appears to be the part played by the surface layers of a very thin strip, which are characterised by a weakening in the orientation (110)[112] and by an increase in the number of disorientated crystallites (see Figure 9). Figures 2 and 3 represent pole figures of deformed strip of 0.05 and 0.005 mm thickness, respectively, and Figures 5 and 7 pole figures of annealed strip of 0.05 mm and 0.003 mm thickness, Card2/3 respectively.

SOV/126-6-5-9/43

Study of the Texture of a 50% Fe-50% Ni Alloy in the Form of Strip of Various Thicknesses

There are 9 figures and 5 references, 3 of which are Soviet, 1 German and 1 English.

ASSOCIATION:

Institut pretsizionnykh splavov TaNIIChM (Institute of Precision Allays of TaNIIChM)

SUBMITTED:

January 31, 1957

Card 3/3

PRESE 1 BORD DETAILED OF SOLVEY. President by sentiments byther the charge activities. Design the presidency of Presiden Alloy) Reserve healthefact, 1939, 563 p. Resident 1 in Secretary (Fresiden Alloy) Reserve healthefact, 1939, 563 p. Resident 1 in Secretary (Fresiden Alloy) Reserve healthefact, 1939, 563 p. Resident 1 in Secretary (Fresiden Alloy) Reserve preserve preserve preserve the control of the	CHE/AGE	igatifut cherroy setallurgi	, Metallurgitdet, 1959. 268) eogies printed.	Contantvanty plansy, toutest	: Te. I. Levit; Tech. Ed.:	i for technish, parazusi, instrument-manifecturing, riss. It mag miss be igni education.	The state of a state of a state of the state	Hundle of the 57	te. Structural s of Ext-Deformation Ta	. On the Problem of B.	issues on Properties 91.	ising Elements 10% or Spirel (Ealt) 111	f the Dependence of a first Allage With III	Study of the Denting of Simetallite	printing therefore of MA	2.te, Determination of low-dagestern had		the K-state in Allers 277	į	stamony money		The section of the se	
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PHASE I BOOK EXPLOITATION

sov/2316

Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii

Metallurgiya SSSR, 1917 - 1957; [t.] II (Metallurgy in the USSR, 1917 - 1957; Vol 2) Moscow, Metallurgizdat, 1959. 813 p. Errata slip inserted. 3,000 copies printed.

Ed. (Title page): I. P. Bardin, Academician; Ed. (Inside book): G. V. Popova; Tech. Ed.: P. G. Islent'yeva.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The articles in this collection present historical data on the achievements of Soviet metallurgy, both ferrous and nonferrous, during the period 1917-1957. Advances in theory and practical application are thoroughly discussed. Many of the articles describe the present status of individual branches of metallurgy and give an idea of what may be expected in the future. Advances made in other countries are also discussed. The articles are accompanied by a large number of references. For further coverage, see Table of Contents.

Card 1/15

Metallurgy in the USSR (Cont.)

sov/2316

TABLE OF CONTENTS:

Tselikov, A. I., Corresponding Member, USSR Academy of Sciences; Ye. S. Rokotyan, Doctor of Technical Sciences; N. P. Gromov, Candidate of Technical Sciences. (Ts NIITMASh and TsNIIChM) Production of Rolled Stock

3

The authors present a historical review of the production of rolled stock in czarist Russia and the Soviet Union from 1721 to 1957. Developments in rolling technique and in the design of rolling mills for various purposes are discussed.

Yermolayev, N. F., Engineer; and P. K. Teterin, Candidate of Technical Sciences. (TSNIIChM) Production of Steel Tubes

38

The article briefly outlines the history of steel-tube production in the USSR (beginning in 1893) and in other countries. The main methods of manufacturing seamless and welded steel tubular products at various Soviet and non-Soviet plants are described. There is some discussion of equipment.

Card 2/15

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SOV/126-8-5-21/29

AUTHORS: Borodkina, M.M., and Gromov, N.P.

TITLE:

Study of Deformation and Recrystallization Textures of an Iron-Nickel Alloy (48% Ni) in Relation to the Degree of Deformation in Cold Rolling 16

PERIODICAL: Fizika metallov i metallovedeniya, Vol 8, 1959, Nr 5, pp 761-769 (USSR)

ABSTRACT: The alloy was made in an induction furnace and had the following composition (wt.%): 47.75% Ni, 0.03% C, 0.55% Mn. 0.22% Si, 0.007% S, remainder iron. As a result of forging and hot rolling a strip of 6 mm thickness was obtained. By means of cold rolling the annealed isotropic cold-rolled material, strips of the alloy to be investigated were obtained, of approximately 50 µ thickness, with a reduction of between 11 and 99.4%, and of 5 µ thickness, with a reduction of between 73.7 and 99.92%. The initial thickness of the rolled material was between 19 μ and 6 mm (Table 1). Rolled materials of various thickness without preferential

Card 1/4

orientation were obtained by cold working with a reduction not exceeding 60% and subsequent annealing at 950 °C. The hot-rolled annealed strip of 6 mm thickness 11

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SOV/126-8-5-21/29

Study of Deformation and Recrystallization Textures of an Iron-Nickel Alloy (48% Ni) in Relation to the Degree of Deformation in Cold Rolling

> was also isotropic. The isotropy of the rolled material was verified by X-ray photographic and ionization methods. Annealing was carried out in a vacuum container (10-2 mm Hg) at 1100 °C for one hour; cooling was carried out at the rate of 100 °C/hour down to 600 °C; thereafter the container was cooled in air. Measurement of magnetic properties was carried out by a ballistic method. For the study of texture, besides the X-ray photographic method an X-ray ionization method with construction of quantitative pole figures was applied. Recording of intensity during exposure for the construction of entire pole figures was carried out by means of a texture attachment to the apparatus URS-501 (Ref 2). The intensity for a standard specimen free from texture, made from powder of the alloy under investigation and having an absorption factor identical with that of the investigated specimen, µt (µ coefficient of linear absorption, t - thickness of the specimen) was taken as unity. Standard specimens were

Card 2/4

67768 SOV/126-8-5-21/29

Study of Deformation and Recrystallization Textures of an Iron-Nickel Alloy (48% Ni) in Relation to the Degree of Deformation in Cold Rolling

also used for determination of corrections associated with drop in intensity with increase in the angle of deflection of the specimen. Figs 1 and 2 are X-ray patterns of specimens deformed to various degrees of reduction and of the same specimens after annealing at 1100 °C; the thickness of the specimens in Fig 1 is 50 µ and that in Fig 2, 5 µ. Figs 3 and 5 are pole figures of deformed (upper row) and annealed (lower row) strips; the thickness of strip in Fig 3 is 50 µ and that in Fig 5 is 5 µ. Fig 1 shows orientations of the texture of Fe-18% Ni alloy. The results of measurements of magnetic properties of the annealed specimens of 50 µ thickness were found to be in good agreement with the change in texture (Table 2). The authors arrive at the following conclusions: 1) as the degree of deformation increases a change in the intensity ratio of the orientations takes place. 2) after annealing a cubic recrystallization texture is observed only when as a result of deformation the texture with the intense

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Study of Deformation and Recrystallization Texture of an Iron-Nickel Alloy (48% Ni) in Relation to the Degree of Deformation in Cold Rolling

components (110) [112] and (110) [335] is formed, which corresponds to a deformation of 99.0%. Further increase in deformation leads to a weakening of the orientations (110) [112] and (110) [335], and after annealing, to a weakening of the cubic recrystallization texture (100) [001] and a fall in magnetic properties. 3) Not only the texture of the surface layers but also an excessive degree of deformation affects the cubic texture of a strip of 5 \mu thickness. 4) The nature of the strip texture change of a Fe-Ni alloy (48% Ni) with increase in degree of deformation appears to indicate that the formation and growth of recrystallization nuclei during annealing takes place in an orientated manner.

Card 4/4

There are 5 figures, 2 tables and 15 references, of which 5 are Soviet, 3 German, 6 English and 1 French.

ASSOCIATION: TSNIICHM

SUBMITTED:

January 10, 1959

ADRIANOVA, V.P.; ANDREYEV, T.V.; ARANOVICH, M.S.; BARSKIY, B.S.; GROMOV, N.P.; CUREVICH, B.Ye.; DVORIN, S.S.; YERMOLAYEV, N.F.; ZVOLIBSKIY, I.S.; KABLUKOVSKIY, A.F.; KAPKLOVICH, A.P.; KASHCHENKO, D.S.; KLIMOVITSKIY, M.D.; KOLOSOV, M.I.; KOROLEV, A.A.; KOCHINEV, Ye.V.; LESKOV, A.V.; LIVSHITS, M.A.; MATYUSHINA, H.V.; MOROZOV, A.N.; POLUKAROV, D.I.; RAVDEL, P.G.; ROKOTYAN, Ye.S.; SMOLYARENKO, D.A.; SOKOLOV, A.N.; USHKIN, I.N.; SHAPIRO, B.S.; KPSHTEYN, Z.D.; AVRUTSKAYA, R.F., red. izd-ve; KARASKV, A.I., tekhn.red.

[Brief handbook on metallurgy, 1960] Kratkii spravochnik metallurga, 1960. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tavetnoi metallurgii, 1960. 369 p. (MIRA 13:7)

(Metallurgy)

POLUKHIN, Petr Ivanovich; FEDOSOV, Naum Maksimovich; KOROLEV, Andrey
Andreyevich; MATVEYEV, Yuriy Mikhaylovich; SMIRNOV, V.S., prof.,
doktor tekhn.nauk, retsenzent; LAUR, G.K., retsenzent; GEOMOV,
N.P., dotsent, kand.tekhn.nauk, red.; GOROBINCHENKO, V.M., red.
izd-va; DOSMINIEKAYA, L.V., tekhn.red.

[Rolling mill practice] Prokatnoe proizvodatvo. Moskva, Gos..
nauchno-tekhn.izd-vo lit-ry po chernoi i tavetnoi metallurgii,
1960. 966 p. (MIRA 13:10)

1. Zamestitel' glavnogo inzhenera Magnitogorakogo metallurgicheskogo kombinata (for Leur).

(Rolling (Metalwork))

"APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051702

ZAROSHCHINSKIY, Mikhail Leont'yevich; FOLUKEIN, P.I., prof., doktor tekhn. nauk, retsenzent; CRCMOV, N.P., prof., retsenzent; FEDOSOV, N.M., prof., retsenzent; VAGIN, A.A., red. izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Technological principles of rolling mill design]Tekhnologicheskie osnovy proektirovaniia prokatnykh stanov. Moskva, Metallurgizdat, 1962. 443 p. (MIRA 15:12)

(Rolling mills-Design and construction)

"APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051702

POLUKHIN, Petr Ivanovich, prof., doktor tekhn. nauk; GRDINA, Yu.V., prof., doktor tekhn. nauk; ZARVIN, Yevgeniy Yakovlevich, prof.; GROMOV, N.P., prof., nauchnyy red.; GOIDBINCHENKO, V.M., inzh., red. izd-va; ATTOPOVICH, M.K.[deceased], tekhn. red.

[Rolling and heat treatment of railroad rails]Prokatka i termicheskaia obrabotka zheleznodorozhnykh rel'sov. [By]P.I.Polukhim i dr. Moskva, Metallurgizdat, 1962. 510 p. (MIRA 16:2) (Rolling (Metalwork)) (Railroads--Rails)

\$/776/62/000/025/008/025

AUTHORS: Gromov, N. P., Zusman, Sh. I., Agaronik, V. Ya., Barkaya, D.S.

TITLE: On the lengthwise uniformity of the resistance of an extremely thin wire.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernox metallurgii. Sbornik trudov. no. 25. Moscow, 1962. Pretsizioanyye

splavy- pp. 104-116.

TEXT: This paper reports the results of an experimental investigation, performed at the TsNIIChM (Central Scientific Research Institute of Ferrous Metallurgy) intended to develop a methodology and construct equipment for the continuous inspection of the uniformity of the electrical resistance (ER) of extremely thin wires in the source of their motion. The problem is of the greatest importance for a variety of calculating and telemechanical devices in which the uniformity of the electrical resistance of potentiometer wire is a decisive element in determing the accuracy of measurements and telemetered information. The equipment newly constructed was used for the determination of the uniformity of the resistance of Ni-Cr wire 20-50 μ in diam. The experimental equipment comprises an idling feed spool and motor-driven take-up spool, between which the wire is guided by textolite guide rollers while in contact with a pair of spaced-apart contact rollers made of stainless steel

Card 1/3

On the lengthwise uniformity of the resistance S/776/62/000/025/007/025

with a Cr-plated surface. Diam of the contact rollers is 50 mm, that of the guide rollers 20 mm. A braking load is applied to the feed spool. Measurements can be made at contact distances of 1 m or 0.5 m. The linear velocity of the wire is 23-25 m/min. The resistance measurements were performed by means of a DC bridge of the type MBJ (MVU) 49, a high-speed potentiometer of the type EI102 (BP102), and various auxiliary equipments. The theory of the dependence of the ER of the wire on the mechanical stresses prevailing therein is briefly outlined for given values of the Poisson coefficient and the Young modulus of elasticity. The results of an experimental illustrative test are shown graphically, illustrating the linear variation of the dependence up to the elastic limit for a 0.04-mm diam Ni-Cr wire. The conditions necessary to avoid any plastic bending stresses that may arise in contact with the guide and contact rollers are specified. Problems arising from the characteristics of the measuring equipment, the contact equipment, and the deformations of the wire while passing through the contact equipment, and the verification of the functioning of the entire equipment are discussed. It is found that the method and the equipment adopted here are suitable for the continuous measurement of the uniformity of the ER of micron wire along its length in the course of its motion. It is established that the degree of uniformity of the ER becomes less favorable with decreasing thickness of the wire. It is shown that cold-hardened wire exhibits a significantly better uniformity of the ER along its length as compared with

Card 2/3

On the lengthwise uniformity of the resistance S/776/62/000/025/007/025 .

wire that has been subjected to heat treatment. The source of the impairment of the uniformity in the latter is attributed primarily to the quenching of the wire in the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system. It is shown that significant impairments in the uniformity of the furnace system.

GROMOV, N.P.; ZUSMAN, Sh.I.; AGARONIK, V.Ya.; BARKAYA, D.S.

Uniformity of resistance along the length of extremely thin wire.
Sbor. trud. TSMIICHM no.25;104-116 '62. (MIRA 15;6)
(Electronic apparatus and appliances—Testing)
(Electric resistance)

GROMOV, N. P.; KASATKIN, N. M.; KAPLAN, A. S. Laminated metals. Standartizatsiia 26 no.10:16-21 0 62. (MIRA 15:10)

(Laminated metals)

GROMOV, N. P.; KALIMENEV, A. A.

Effect of tension on the position of the neutral cross-s ction during rolling. Izv. vys.ucheb.zav.; chern.met 7. no. 5:81-84 (MIRA 17:5)

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